

Title (en)

HOLE-FILLING SLEEVE AND WASHER DESIGN FOR BOLT INSTALLATION

Title (de)

DESIGN EINER LOCHFÜLLENDE HÜLSE UND UNTERLEGSCHEIBE FÜR BOLZENINSTALLATION

Title (fr)

AGENCEMENT CONSTITUÉ D'UN MANCHON DE REMPLISSAGE DE TROU ET D'UNE RONDELLE, ET DESTINÉ À L'INSTALLATION D'UN BOULON

Publication

EP 3177530 A1 20170614 (EN)

Application

EP 15722621 A 20150427

Priority

- US 201414454161 A 20140807
- US 2015027708 W 20150427

Abstract (en)

[origin: WO2016022184A1] A fastener assembly (100) which includes a sleeve (104) which includes a cylindrical construction having a first and second end portions and an outside diameter. The fastener assembly further includes a washer (110) associated with the sleeve wherein the washer includes a body which defines a first side (112) and an opposing second side (114) and defines an opening (120) which extends from the first side toward the second side. The opening defines a diameter greater than the outside diameter of the sleeve and the body defines a recess (122) which has a diameter greater than the diameter of the opening wherein the recess extends from the second side (114) towards the first side (112) such that the recess and the opening are in communication with one another. A method for using this fastener assembly is also provided.

IPC 8 full level

B64D 45/02 (2006.01); **F16B 19/02** (2006.01)

CPC (source: EP US)

B23P 19/06 (2013.01 - US); **B64D 45/02** (2013.01 - EP US); **F16B 19/02** (2013.01 - EP US); **F16B 43/00** (2013.01 - EP US);
F16B 5/02 (2013.01 - EP US)

Citation (search report)

See references of WO 2016022184A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2016022184 A1 20160211; AU 2015298754 A1 20161103; AU 2015298754 B2 20180719; CA 2946992 A1 20160211;
CA 2946992 C 20201027; CN 106795902 A 20170531; CN 106795902 B 20190830; EP 3177530 A1 20170614; EP 3177530 B1 20190410;
ES 2730750 T3 20191112; JP 2017528660 A 20170928; JP 6571164 B2 20190904; US 2016040709 A1 20160211; US 9714676 B2 20170725

DOCDB simple family (application)

US 2015027708 W 20150427; AU 2015298754 A 20150427; CA 2946992 A 20150427; CN 201580035801 A 20150427;
EP 15722621 A 20150427; ES 15722621 T 20150427; JP 2017506698 A 20150427; US 201414454161 A 20140807